
AWIPS CONTRACTOR INTERFACE NOTE 6 (for Electronics Systems Analysts)

Engineering Division

W/OSO321: FJZ/WJB

SUBJECT : AWIPS Workstation Hard Disk Upgrade

PURPOSE : To provide instructions to AWIPS development phase sites on replacing the workstations' 1 GB hard drive with a 2 GB hard drive.

SECURITY LEVEL : root

EQUIPMENT AFFECTED : AWIPS early development phase site workstations. Affected site list provided in attachment A.

REQUIRED ITEMS : A 2 GB hard drive will be sent by PRC to the affected sites.

TOOLS AND TEST EQUIPMENT REQUIRED : #10 Torx screwdriver
#15 Torx screwdriver
Medium-tip flathead screwdriver
Electrostatic wrist strap

TIME REQUIRED : Approximately 1 hour per workstation, 30 minutes for hard drive replacement, and 30 minutes for the back-up and restore procedure.

EFFECT ON OTHER INSTRUCTIONS : None

VERIFICATION STATEMENT : This hard drive upgrade procedure was successfully completed and validated at the National Modernization and Test system Weather Forecast Office (NMTW) in Silver Spring, MD.

BACKGROUND

Early AWIPS development phase sites workstations were delivered each with a total 3 GB of hard drive space (one 1 GB and one 2 GB). A number of 2 GB hard drives are now available, offering early AWIPS development sites the opportunity to replace their 1 GB with 2 GB hard drives. The hard drive replacement will align the development phase site workstations hardware configuration, with the remaining AWIPS sites' workstations.

These installation instructions are written with the assumption the hard drive jumper settings were properly configured at PRC's McLean, VA, facility prior to shipping. This procedure includes the hard drive backup, replacement, and restore procedures. **NOTE: This is not a mandatory procedure. The 2 GB hard drive installation is under the discretion of the site ESA.**



To eliminate “Node Down” alarms at the NCF, notify the NCF at 301-713-1288 before performing the hard drive replacement procedure.

PROCEDURE

A. Back-up Procedure

1. At the workstation, verify the workstation vg01 script is available by typing:

```
ll /home/ncfuser/ws.vg01
```

```
-r-xr-xr-x 1 root sys 717 Nov 17 15:23 /home/ncfuser/ws.vg01
```

If this file does not exist, call the NCF at 301-713-1288 and request the file be uploaded to your site. While waiting for the file to be uploaded, proceed to step 2 to backup the current vg01 partitions.

2. Backup the 1 GB hard drive by typing in the following command:

```
tar cf /data/fxa/workFiles/ws.tar /awips/fxa /awips/ops /data/logs
```

3. Once the “tar” procedure is complete, verify the file listing by typing:

```
tar tf /data/fxa/workFiles/ws.tar
```

NOTE: This will list all the archived files. Ensure the “/data/logs” directory is listed last and the “tar” command did not return an error (i.e. end of file).

4. Perform an orderly shut down of the workstation by typing:

```
/etc/shutdown -h -y 0
```

When the workstation has completed its shutdown (i.e., power light flashing), power OFF the workstation and remove the power cord from the power supply.

B. Disk Replacement Procedure



Use a wrist strap and adhere to proper electrostatic procedures and precautions while handling and installing the disk drives.

1. Removing the storage assembly.
 - a. Remove the workstation front cover by pressing the two release buttons on the top front of the workstation and pulling out and down (figure 1).

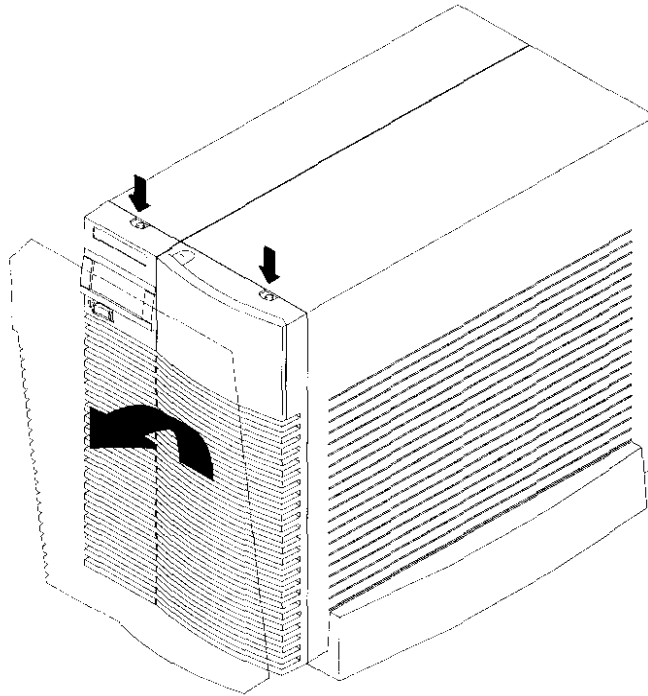


Figure 1

- b. Loosen the two captive screws at the top center (figure 2).
- c. Pull down on the drawer ejector handle on the top right side, and slide the storage assembly slowly out of the workstation chassis.
- d. When the storage assembly is approximately 2/3 out, depress the safety latch on the left side and remove the storage assembly completely from the workstation (figure 2).

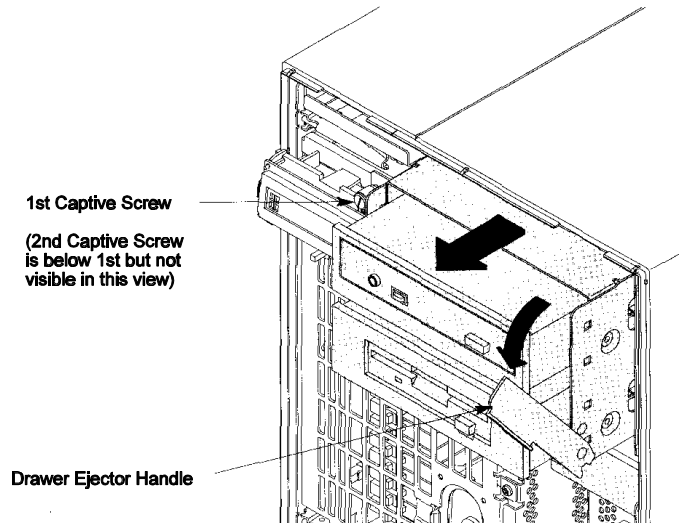


Figure 2

2. Removing the 1 GB hard drive.
 - a. Place the storage assembly on a properly grounded antistatic work surface with the rear of the assembly facing out.
 - b. Disconnect the power connector and the SCSI cable from the rear of the top drive in the storage assembly.

- c. Remove the two screws holding the drive in the storage drawer (top drive only) (figure 3).

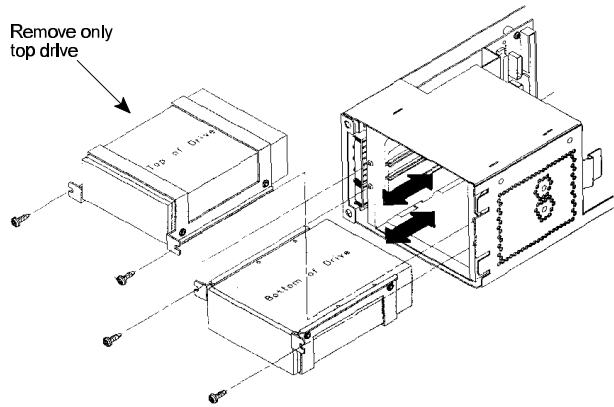


Figure 3

- d. Slide the drive out of the storage assembly.
 - e. Remove the four screws that hold the drive to the mounting bracket, and remove the old drive.
3. Installing the 2 GB disk drive.



The hard drive jumper settings are preset and should not be changed.

- a. Remove the 2 GB disk from the antistatic bag and place it on the antistatic work surface.
- b. On the new drive, replace the mounting bracket removed in step 2e.
NOTE: Screws included with the new disk should be discarded. Use the screws from the removed drive.

- c. With the disk mounting bracket between the guides on each side of the storage assembly, slide the disk into the storage assembly vacated by the 1 GB drive and secure it with the two hold-down screws. **NOTE:** Do not overtighten the side screws.
 - d. Reconnect the power connector and the SCSI cable to the rear of the drive.
4. Reinstalling the drive bay.



Keep fingers away from the right side of the drive bay when pushing storage assembly back into the workstation.

- a. Slide the storage assembly back into the workstation chassis ensuring the drawer ejector handle rotates around the release pin.
 - b. Tighten the captive screws on the left side of the storage assembly.
 - c. Reinstall the front cover by inserting the guide pins on the bottom of the front cover into the guides on the bottom of the workstation chassis.
 - d. Swing the front cover up, and push it firmly into the workstation housing. The front panel edges automatically align with the workstation housing, and the top latch buttons pop up into position.
5. Powering up the workstation and verifying proper installation.
- a. Reconnect the power cord to the power supply.
 - b. Log into the Xyplex system console to access the boot menu.
 - c. Power ON the workstation, and monitor the boot process from the system console. **NOTE:** If the workstation's console port is inaccessible through the Xyplex system console, call the NCF at (301) 713-1288.
 - d. Interrupt the boot process at the break point, and at the prompt, issue a search command:

Main Menu: Enter command or menu > **sea**

- e. Ensure the system recognizes a P0 (device) with a SCSI address of 6 and a P1 (device) with a SCSI address of 5. The displayed message should be similar to the following:

Path Number	Device Path	Device Type
P0	core.FWSCSI.6.0	SEAGATE ST32430W
P1	core.FWSCSI.5.0	SEAGATE ST32550W

- f. Reboot the workstation with a boot command, and do **NOT** interact with initial program load (IPL):

Main Menu: Enter command or menu > **bo**

Interact with IPL (Y or N?)> **n**

C. Recreating vg01 Procedure

1. After the disk is replaced and the workstation is rebooted, log in to the workstation as **root**, and verify the new 2 GB disk is available by typing:

```
ioscan |grep disk
```

2. The response should be as follows:

8/0.5.0	disk	SEAGATE ST32430W
8/0.6.0	disk	SEAGATE ST32550W

3. Recreate the vg01 partitions on the new disk by typing in the following command:

```
/home/ncfuser/ws.vg01
```

4. Enter the following command to restore the unpopulated partitions:

```
tar xf /data/fixa/workFiles/ws.tar
```

5. Reboot the workstation by typing:

```
/etc/reboot
```

6. The restoration of the new 2 GB hard drive is now complete.

7. As **root**, clean up the workstation “tar” file on ds1 by typing:

```
rm /data/fixa/workFiles/ws.tar
```

8. Repeat procedures A through C for the remaining workstations.

This completes the workstation 1GB hard drive replacement procedure.

MAINTENANCE REPORTING INSTRUCTIONS

Target date for workstation 1 GB hard drive replacement shall be coordinated with the AWIPS focal point or the meteorologist-in-charge. Report the completed modification on WS Form A-26, Engineering Management Reporting System, according to the instructions in Engineering Handbook No. 4 (EHB-4), Engineering Management Reporting System (EMRS), part 2. Include the the following information on the A-26:

- C In block 7 input **"AWIPS"**.
- C In block 8 input **"001"**.
- C In block 17a input **"C6"**.

A sample A-26, is provided as attachment B.

POINT OF CONTACT

For questions pertaining to this note, please contact Franz J.G. Zichy at 301-713-1833 ext. 128 or his pager number at 301-610-1710.

John McNulty
Chief, Engineering Division

ATTACHMENT A

List of Affected Sites for Workstation Disk Upgrade

Number	Site Name	Site ID
1	NOAA Science Center (WFO)	WBC
2	National Weather Service Training Center (RFC)	TTCM7
3	National Weather Service Training Center (WFO)	TTCM7
4	Tulsa (WFO)	TSA
5	Kansas City (RFC)	KRF
6	Kansas City (WFO)	EAX
7	Salt Lake City (RFC)	STR
8	Salt Lake City (WFO)	SLC
9	Dodge City (WFO)	DDC
10	Goodland (WFO)	GLD
11	Topeka (WFO)	TOP
12	Wichita (WFO)	ICT

ATTACHMENT B

WS HQ USE ONLY		WS FORM A-26 (4/94) <small>Supersedes WS Form A-23 and WS Form H-28, which are obsolete</small>				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE				Document Number G 49978									
General Information		1. Open Date 04 21 00		Time 0900		2. Initials JMM		3. Response Priority (check one) <input type="radio"/> Immediate <input type="radio"/> Routine			4. Close Date 04 / 21 / 00		Time 1400						
		5. Description Perform Modification I.A.W. AWIPS Contractor Interface Note 6																	
Equipment Information		6. Station ID CTP		7. Equipment Code AWIPS		8. Serial Number 001		9. TM M		10. AT M		11. How Mal. 999							
12. EQUIPMENT OPERATIONAL STATUS TIMES		a. Fully Operational <div></div>		b. Logistics Delay <div></div>		Partly Operational		c. All Other <div></div>		d. Logistics Delay <div></div>		Not Operational		e. All Other <div></div>					
13. Parts Failure Information														14. Work Load Information					
Block #		a. ASN		b. NSN		c. TM		d. AT		e. How Mal.		f. Qty.		g. Maint. Hrs.		Type		Staff Hrs.	
1																a. Routine			
2																b. Non-routine			
3																c. Travel			
4																d. Misc.		5:00	
5																e. Overtime			
Miscellaneous Information		15. Maintenance Comments Replaced 1 GB hard drive in 5 workstations I.A.W. AWIPS Contractor Interface Note 6.														16. Initials JMM			
17. SPECIAL PURPOSE REPORTING		a. Mod. No. C6		b. Mod./Act./Deact.Date 04/21/00		c.		d.		e.		f.		g.		h.		i.	
18. CONFIGURATION MGMT. REPORTING (use as directed)		a. Block #		b. Manufacturer's Part No. of New Part		c.		d.		e.		f.		g.		h.		i.	